

and in the Gulf along Texas. He reports that these shrimp are usually too small to be of commercial value but do enter the bait fishery. During our shrimp studies in the Tampa Bay area, specimens of *T. constrictus* have been found with *P. duorarum* specimens in the tanks of the local bait dealers.

Various *Trachypeneus* species occurring in Indo-Pacific regions, Australia, Central and South American countries represent a large portion of the fisheries of these areas. Therefore, the value of this small shrimp from the Tortugas grounds should not be overlooked. Although the evidence presented here is based on a very small sample it suggests that *T. similis* is of more than minor importance. Accumulated data on the penaeids of Tortugas, being compiled for publication, should contribute a better knowledge of the shrimps from this area.—BONNIE ELDRED, Florida State Board of Conservation Marine Laboratory.

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CANINE TEETH IN FLORIDA WHITE-TAILED DEER

(*ODOCOILEUS VIRGINIANUS SEMINOLUS* GOLDMAN and KELLOGG)

Canine teeth in the upper jaw of North American deer are usually lacking although their occurrence has been reported by various authors. Nordquist (1941, Cal. Fish and Game, 27:39), observed canines in two male mule deer from California and Allen (1900, Amer. Mus. Nat. Hist., Bull. 12, pp. 191-262), in three white-tailed deer from Mexico. Van Gelder and Hoffmeister (1953, Journ. Wildl. Mgt., 17:100), report well developed upper canine teeth in a white-tailed deer specimen from Chiapas, Mexico. These latter authors examined 325 skulls in collections of the American Museum, Chicago Natural History Museum and the University of Illinois Museum of Natural History. Among these specimens the occurrence of upper canines was observed in 11 individuals, 3 of which were among those previously reported by Allen (*op. cit.*). Van Gelder and Hoffmeister (*op. cit.*) conclude that canine teeth are apparently more common in Central American specimens because 6 of 8 in their sample from known localities were from south of the 24th parallel. Kellogg (*in* Van Gelder and Hoffmeister, 1953) reports one or two instances of canines in 900 skulls of white-tailed deer he examined and additional observations of canines have been reported by Severinghaus (Editor's note in Van Gelder and Hoffmeister, 1953) for deer in New York. A cursory examination of 18,000 specimens in New York revealed the presence of canines in 23 individuals. Severinghaus indicates, however, that two-thirds of these deer were seen only in fresh condition at checking stations and suggests that some very small canines were probably overlooked.

In connection with recent studies of Florida white-tailed deer skulls from various localities definite examples of upper canine tooth development have been observed. A total of 95 skulls was examined and the presence of upper canine teeth was evident in 3 males, 2 adults and a yearling, from Volusia County in east central Florida, and a yearling female from Collier County in the extreme southwest part of the state. In the 2 adults the canines were well developed and the diastema from the anteriormost margin

of the alveolus of the canines to the posteriormost margin of the alveolus of the second premolars (following the formula $P \frac{0 \ 2 \ 3 \ 4}{0 \ 2 \ 3 \ 4}$ suggested by Riney, 1951, Journ. Wildl. Mgt., 15:1, pp. 99-100), was 4.4 cm and 5.0 cm respectively. In the case of the yearlings only rudimentary canines were evident and it is probable that the presence of these teeth would have been overlooked had the animals been examined in a fresh condition.

The relatively high frequency of canine teeth occurrence in Florida deer (4 of 95 or about 1:28) compares with a ratio of 1:30 (11 of 325) reported by Van Gelder and Hoffmeister (*op. cit.*). An interesting aspect of the Florida study is that 3 of the 4 specimens possessing canine teeth were observed in a series of 13 skulls collected from the Tomoka Wildlife Management Area in Volusia County during the 1957-58 hunting season. Whether the high incidence of occurrence in this population is due to chance alone or is genetically linked remains to be determined, but nevertheless is an unusual situation and merits further investigation.

Access to deer skull collections of Robert Garrison, Stephen Fickett and Donald D. Strode of the Florida Game and Fresh Water Fish Commission is acknowledged. Assistance given by various Commission Wildlife Officers is also appreciated.—CHARLES M. LOVELESS and RICHARD F. HARLOW, Florida Game and Fresh Water Fish Commission.